

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-5, 7-13, 15, 17, 19, and 20 are currently pending. Claims 19 and 20 have been added; and Claims 1-5, 7-9, 11-13, and 15 have been amended by the presented amendment. No new matter is added.¹

Applicants wish to thank the Examiner for the interview granted to Applicants' representatives on May 27, 2009, at which time the finality of the Office Action dated April 20, 2009, was discussed, as substantially summarized hereinafter. At the conclusion of the interview, the Examiner confirmed that the Office Action dated April 20, 2009, should be a non-final rejection and will be treated as such.² Accordingly, an amendment under 37 C.F.R. § 1.111 is being timely filed herewith in response to the Office Action dated April 20, 2009.

In the Office Action, Claims 1-5, 7-13, 15, and 17 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,867,478 to Baum (hereinafter "Baum") and U.S. Patent No. 6,532,223 to Sakoda et al. (hereinafter Sakoda).

Amended Claim 1 is directed to a channel structuring method performed by a base station of a communication system configuring channels wherein transmission signals are modulated by orthogonal frequency division multiplexing comprising n sub-carriers and multiplexed by time division multiplexing to configure downlink channels, said method comprising:

providing, at the base station, time frames by
segmenting a communication channel of said n sub-carriers at
every predetermined interval;

selecting, at the base station, from the n sub-carriers, a
predetermined number of sub-carriers for insertion of

¹ See, e.g., page 11, lines 24-26 of Applicants' specification.

² See Interview Summary dated June 3, 2009.

accompanying control channel signals and common pilot signals; and

inserting, at the base station, an accompanying control channel signal and a common pilot signal into the time frames by time division multiplexing with respect to the selected sub-carriers while ensuring that ***at least one of the selected sub-carriers selected from the n sub-carriers used for the frequency division multiplexing has both an accompanying control channel signal and a common pilot signal inserted therein.*** [Emphasis Added].

Claim 1 has been amended to clarify that the inserting, at the base station, inserts an accompanying control channel signal and a common pilot signal into the time frames by time division multiplexing with respect to the selected sub-carriers while ensuring that at least one of the selected sub-carriers selected from the n sub-carriers used for the frequency division multiplexing has both ***an accompanying control channel*** signal and a common pilot signal inserted therein.

For illustrative purposes, in the claimed invention, an accompanying channel, which is a channel accompanying an information or a data channel, is inserted along with the common pilot signal into the time frames by time division multiplexing with respect to the selected sub-carriers.³

The Office Action associates the previously claimed common control channel signal with a synchronization signal (1202), illustrated in Fig. 12 and described in column 14, lines 6-16 and column 10, lines 58-63 of Baum.⁴

In column 14, lines 6-16, Baum describes that a transmission slot includes pilot codes (1204) and a synchronization signal (1202). Further, in column 10, lines 58-63, Baum describes that the synchronization signal (1202) can be replaced with paging or broadcasting signals.⁵

³ See, e.g., page 11, lines 24-26 of Applicants' specification.

⁴ See Office Action dated April 20, 2009, page 7.

⁵ Id.

However, there is no disclosure in Baum that at least one of the sub-carriers, selected from plural sub-carriers used for the frequency division multiplexing, has both an accompanying control channel signal and pilot codes (1204) inserted therein. In Baum, the transmission slot does not include an accompanying control channel.

Further, it is respectfully submitted that Sakoda does not remedy the deficiencies of Baum discussed above. Thus, no matter how the teachings of Baum and Sakoda are combined, the combination does not teach or suggest that at least one of the selected sub-carriers selected from the n sub-carriers used for the frequency division multiplexing has both an accompanying control channel signal and a common pilot signal inserted therein, as recited in amended Claim 1.

Please note that the discussion regarding independent Claim 1 also applies to independent Claim 8 because Claim 8 recites features analogous to the features recited in Claim 1.

Accordingly, it is respectfully submitted that independent Claims 1 and 8 patentably define over any combination of Baum and Sakoda.

In addition, for the reasons discussed above regarding the patentability of independent Claims 1 and 8 over any combination of Baum and Sakoda, it is respectfully submitted that dependent Claims 2-5, 7, 9-13, 15, and 17, which directly or indirectly depend from independent Claims 1 or 8, also patentably define over any combination of Baum and Sakoda.

The present amendment adds Claims 19 and 20 for examination on the merits. No new matter has been added.⁶ It is respectfully submitted that the features of Claims 19 and 20 distinguish from the features recited in Baum and Sakoda.

⁶ See, e.g., page 11, lines 24-26 of Applicants' specification.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

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